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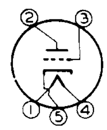
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DETECTOR, AMPLIFIER, OSCILLATOR

ACORN TYPE

Especially for wavelengths between 0.5 meter and 5 meters

Heater	Coated Unipotential Cathode	
Voltage	6.3	a-c or d-c volts
Current	0.15	amp.
Direct Interelectrode Capacitances:●		
Grid to Plate	1.4	μμf
Grid to Cathode	1.0	μμf
Plate to Cathode	0.6	μμf
Overall Length		1-7/32" ± 5/32"
Overall Diameter		1-3/32" ± 1/16"
Bulb	*See Outline in GENERAL SECTION*	T-4½
Base	*See Outline in GENERAL SECTION*	Small Radial 5-Pin ←
Pin 1 - Heater		Pin 4 - Heater
Pin 2 - Plate		Pin 5 - Cathode
Pin 3 - Grid		
RCA Socket		Stock No. 9925
Mounting Position		Any



Short Part of Bulb: Bottom
BOTTOM VIEW (5BC)

Maximum Ratings Are Design-Center Values

A-F AMPLIFIER

D-C Plate Voltage	250 max.	volts
Plate Dissipation	1.6 max.	watts
D-C Heater-Cathode Potential	80 max.	volts ←

Typical Operation and Characteristics— Class A_1 Amplifier:

D-C Plate Voltage	90	135	180	250	volts
D-C Grid Voltage*	-2.5	-3.75	-5	-7	volts
Amplification Factor	25	25	25	25	
Plate Resistance	14700	13200	12500	11400	ohms
Transconductance	1700	1900	2000	2200	μmhos
D-C Plate Current	2.5	3.5	4.5	6.3	ma.
Load Resistance	-	-	20000	-	ohms
Second Harmonic Dist.	-	-	5	-	%
Power Output	-	-	135	-	mw

Typical Operation with Resistance-Coupling:

Plate-Supply Voltage°	180	volts
D-C Grid Voltage*	-3.5	volts
Load Resistance	250000	ohms
Plate Current	0.42	ma.
Second Harmonic Distortion	5	%
Voltage Output	45 RMS	volts
Voltage Gain	20 approx.	

R-F POWER AMPLIFIER & OSCILLATOR - Class C

Plate Modulated or C. W.

D-C Plate Voltage	180 max.	volts
D-C Plate Current	8 max.	ma.
D-C Grid Current	2 max.	ma.
D-C Heater-Cathode Potential	80 max.	volts ←

Typical Operation:

D-C Plate Voltage	180	volts
D-C Grid Voltage	-35 approx.	volts
D-C Plate Current	7	ma.

●, *, °: See next page.

← Indicates a change.

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DETECTOR, AMPLIFIER, OSCILLATOR

(continued from preceding page)

D-C Grid Current	1.5 approx. ma.
Power Output**	0.5 approx. watt

DETECTOR

Typical Operation:	*Biased*	*Grid-Leak*	
Plate-Supply Voltage°	180	45	volts
Grid Voltage	-7 approx.	Grid Return to Cathode	volts
Load Resistance	0.25	-	megohm
Plate Current	Adjusted to 0.2 ma. approx. with no input signal.	-	ma.
Cathode Resistor	50000 approx.	-	ohms
Grid Leak	-	1 to 5	megohms
Grid Condenser	-	0.00025	µf

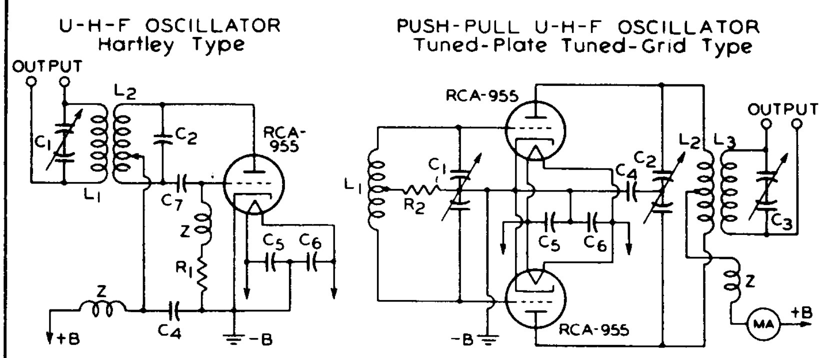
→ ● With no external shield.

* Under maximum rated conditions, the resistance in the grid circuit should not exceed 0.1 megohm with fixed bias, or 0.5 megohm with cathode bias.

° This is a plate-supply voltage value. The voltage effective at plate will be plate-supply voltage minus the voltage drop in load caused by plate current.

** At 5 meters. Only moderate reduction in this value will be found for wavelengths as low as 1 meter. Below 1 meter, the power output decreases as the wavelength is decreased.

R-F grounding by means of condensers placed close to the tube pins is required if the full capabilities of the 955 for ultra-high-frequency uses are to be obtained.

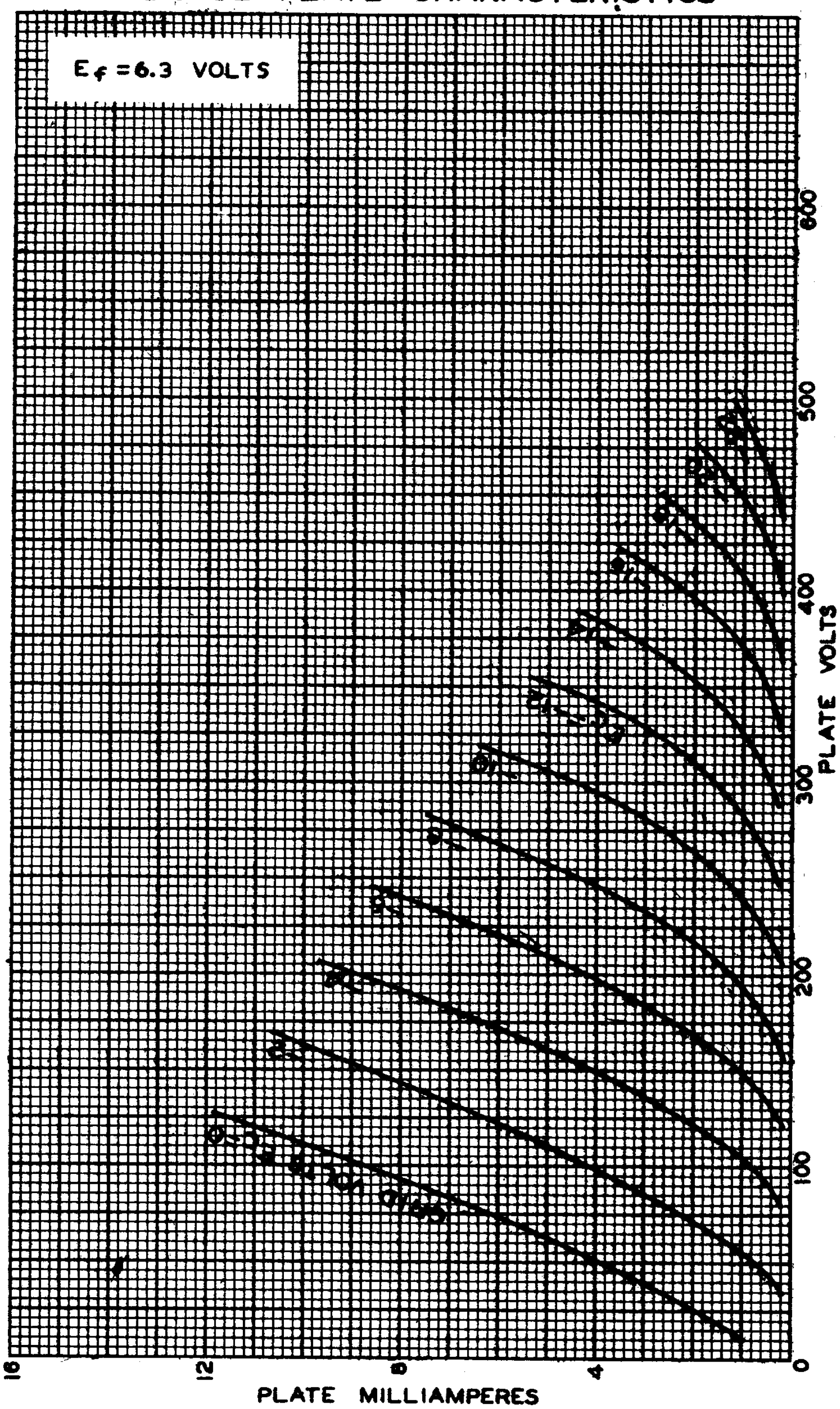


L_1C_1, L_2C_2, L_3C_3 = DEPEND ON FREQUENCY RANGE DESIRED
C_4, C_5, C_6 = 100 µµf
C_7 = 50 µµf
R_1 = 20000 TO 25000 OHMS, 1/2 WATT
R_2 = 10000 TO 12500 OHMS, 1/2 WATT
Z = R-F CHOKE

 ← Indicates a change.

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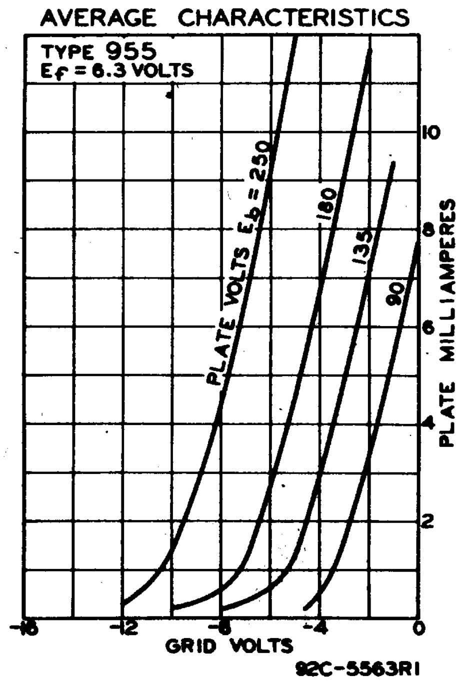
AVERAGE PLATE CHARACTERISTICS

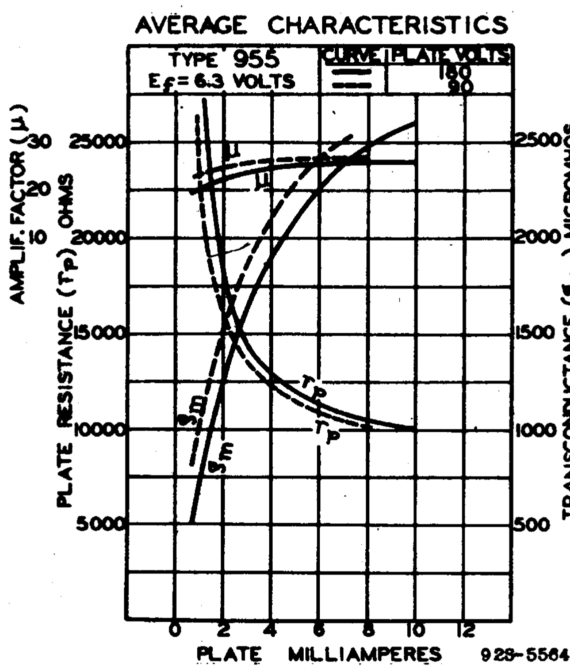


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CHARACTERISTICS CURVES





July 1, 1941

RCA RADIOTRON DIVISION
RCA MANUFACTURING COMPANY, INC.

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